

7. (NEW) The method according to claim 4, wherein the derivatized nucleotide comprises biotin, thiol or hydrazine.

8. (NEW) The method according to claim 4, wherein the derivatized nucleotide comprises a radiolabel.

9. (NEW) The method according to claim 8, wherein the radiolabel comprises ^3H or ^{32}P .

10. (NEW) The method according to claim 4, wherein the nucleotide triphosphates comprise at least one of ATP, GTP, CTP, TTP, and UTP and at least one non-standard nucleotide triphosphate selected from the group consisting of pyDAD, puADA, pyAAD, puDDA, pyDDA, puAAD, pyADD and puDAA.

11. (NEW) The method according to claim 4, wherein the step of forming an oligonucleotide complementary to a portion of the template by enzymatic polymerization comprises contacting the oligonucleotide template with a mixture of nucleotide triphosphates and a polymerase enzyme.

12. (NEW) The method according to claim 4, wherein the polymerase enzyme is a DNA polymerase enzyme selected from the group consisting of AMV reverse transcriptase, T4 DNA polymerase, and Klenow fragment of DNA polymerase I.

13. (NEW) The method according to claim 4, wherein the polymerase enzyme is a Klenow fragment of DNA polymerase I.

14. (NEW) The method according to claim 4, wherein the polymerase enzyme is T7 RNA polymerase.